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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,744	01/19/2005	Michael Richard Richardson	038665-55793US	6844
7590 07/20/2006			EXAMINER	
Crowell & Moring PO Box 14300 Washington, DC 20044-4300			LU, ZHIYU	
			ART UNIT	PAPER NUMBER
			2618	
DATE MAILED: 07/20/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/521,744

Applicant(s)

RICHARDSON, MICHAEL  
RICHARD

Examiner

Zhiyu Lu

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 2-8 are objected to because of the following informalities:

In claims 2-8, replace “A method” with [The method] to correct antecedent basis errors.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-8 are rejected under 35 U.S.C. 102(a) as being anticipated by Miya et al.

(US2003/0186725).

Regarding claim 1, Miya et al. anticipate a method of calibrating an antenna and receiver system having multiple channels, each channel comprising an antenna, feed cable and associated receiver components (Fig. 14), the method comprising the steps of:

(i) applying a wideband calibration signal to each antenna feed, the similar characteristics to an operational wideband calibration signal having signal (paragraphs 0025-0027);

(ii) measuring a correlation response across a plurality of said channels (paragraphs 0026-0027);

(iii) deriving an estimate of signal transfer response for each of said plurality of channels based on the correlation response (paragraphs 0029-0030); and

(iv) applying compensation factors for each of said plurality of channels derived from the estimate of signal transfer response (paragraph 0031).

Regarding claim 2, Miya et al. anticipate the limitation of claim 1.

Miya et al. also anticipate said plurality of channels comprise all said multiple channels and wherein, at step (ii), the correlation response is measured with reference to said wideband calibration signal (paragraphs 0025-0027).

Regarding claim 3, Miya et al. teach the limitation of claim 1.

Miya et al. do not expressly disclose said plurality of channels comprise all but a selected one of said multiple channels and wherein at step (ii), the correlation response is measured with reference to said selected one channel (paragraphs 0028, 0065).

Miya et al. teach comparing each correlator output between radio reception units (paragraph 0028) and comparing receive points with the same reference identification point (paragraph 0065), which means one of the receive point is selected as reference.

Regarding claim 4, Miya et al. anticipate the limitation of claim 1.

Miya et al. also anticipate said wideband calibration signal comprises a pseudo-random binary sequence modulated according to a modulation scheme providing similar modulation and bandwidth characteristics to those of the operational signal (paragraphs 0021-0026).

Regarding claim 5, Miya et al. anticipate the limitation of claim 1.

Miya et al. also anticipate at step (iii), deriving said estimate of signal transfer response comprises determining the delay through the respective channel (paragraphs 0026-0030).

Regarding claim 6, Miya et al. anticipate the limitation of claim 1.

Miya et al. also anticipate at step (iii), deriving said estimate of signal transfer response further comprises deriving phase characteristics of the respective channel (paragraphs 0026-0030).

Regarding claim 7, Miya et al. anticipate the limitation of claim 1.

Miya et al. also anticipate at step (iii), deriving said estimate of signal transfer response further comprises deriving amplitude characteristics of the respective channel (paragraphs 0026-0030).

Regarding claim 8, Miya et al. anticipate the limitation of claim 1.

Miya et al. also anticipate further comprising the step of:

(v) repeating steps (i) to (iv) to compensate for changes in signal transfer response over one or more of said plurality of channels (paragraphs 0033-0036, 0085).

Art Unit: 2618

*Conclusion*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhiyu Lu whose telephone number is (571) 272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu  
June 30, 2006

  
**NAY MAUNG**  
**SUPERVISORY PATENT EXAMINER**